

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Air Quality Engineering Inc

Enterprise Minnesota

Air Quality Engineering Improves Efficiency Through Facility Design Layout

Client Profile:

Air Quality Engineering (AQE) is a manufacturer and world-wide distributor of air filtration systems. Their product line includes cartridge dust collectors, bag filters, HEPA filters, electronic air cleaners, activated carbon media for gaseous contaminants and commercial air cleaners. This equipment serves the industrial, commercial and residential markets for control of coolant mist, welding fume, grinding dust, mold, pollen, allergens, and tobacco smoke. AQE has also recently added restaurant kitchen exhaust equipment to their product line. AQE employs over 45 people at their facility in Brooklyn Park, Minnesota.

Situation:

AQE manufactures a product line called the Mistbuster, a compact air cleaner for metalworking applications used primarily in manufacturing facilities. AQE has always built each unit on a cart-assembly. Yet, as customers ordered higher volumes of the Mistbuster, AQE's inefficient assembly formed a bottleneck of activity in production. AQE recognized that the production line needed to be revamped and contacted Enterprise Minnesota, a NIST MEP network affiliate, for help.

Solution:

Enterprise Minnesota worked with AQE to develop a more efficient facility design layout for the MistBuster product line. Enterprise Minnesota facilitated a process for employees to provide input on improving efficiency. AQE identified several issues with the current process and offered their ideas on how to layout the new production line. These ideas included configuring the line to accommodate variations and options in the MistBuster product, and improving ergonomic concerns regarding lifting the units onto the line for assembly and off the line for packaging. Using this employee input, the company identified a suitable existing space within the plant and went to work redesigning a better process. They recycled old tables and carts, laid out new steps for production, added a lift table at the beginning, a jib crane at the end, and came up with a line that increased efficiency, removed bottlenecks, and improved production flow. As a result of Enterprise Missouri's assistance, AQE now produces the units more quickly, with greater variety, and in higher volume.

Results:

- * Anticipated increase in production by 20 to 40 percent.
- * Improved employee morale.

Testimonial:

"We knew that there was a solution for us, a better way to be building this product in our space, and we now have a really improved line. We're a small company that doesn't have an industrial engineer on staff, so that's where it was helpful to have an Enterprise Minnesota come in."

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Heidi Oas, President